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L24: Entry 37 of 38

File: DWPI

Mar 6, 2001

DERWENT-ACC-NO: 2001-270603

DERWENT-WEEK: 200128

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TITLE: Production of fructosyl-valine for measuring hemoglobin A1c in diabetes mellitus patient, involves enzymatically treating protein whose N-terminal valine is coupled to fructose, by serine carboxypeptidase

## PATENT-ASSIGNEE:

ASSIGNEE

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CODE

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PRIORITY-DATA: 1999JP-0235324 (August 23, 1999)

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## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<input type="checkbox"/> JP 2001057897 A	March 6, 2001		005	C12P013/08

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP2001057897A	August 23, 1999	1999JP-0235324	

INT-CL (IPC): C12P 13/08; C12Q 1/26; C12Q 1/28; G01N 33/72

ABSTRACTED-PUB-NO: JP2001057897A

## BASIC-ABSTRACT:

NOVELTY - Production of fructosyl-valine comprises coupling N-terminal valine residue of protein or peptide to fructose to form fructosyl-valine, which is then removed from the peptide or protein by enzymatic treatment, using serine carboxypeptidase (EC3.4.16.1).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for fructosyl valine assay, which involves contacting keto-amine oxidase with fructosyl-valine and measuring the hydrogen peroxide formed.

USE - Fructosyl-valine is useful for measuring hemoglobin A1c, which is useful as a parameter of mean glucose level in diabetes mellitus patient.

ADVANTAGE - Amount of fructosyl-valine, and hence the amount of hemoglobin A1c, can be measured with high accuracy. Production of fructosyl-valine is very simple.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: PRODUCE FRUCTOSYL VALINE MEASURE DIABETES MELLITUS PATIENT ENZYME  
TREAT PROTEIN N TERMINAL VALINE COUPLE FRUCTOSE SERINE

DERWENT-CLASS: B03 D16 S03

CPI-CODES: B04-B04D2; B05-C08; B10-A07; B10-B02J; B11-C08E3; B12-K04A; B14-S04;  
D05-C11; D05-H08; D05-H09;

EPI-CODES: S03-E14H;

CHEMICAL-CODES:

Chemical Indexing M2 \*01\*  
Fragmentation Code  
C101 C408 C550 C730 C800 C801 C802 C804 C805 C807  
M411 M750 M904 M905 M910 N102 Q233  
Specific Compounds  
01732K 01732A  
Registry Numbers  
1732U

Chemical Indexing M1 \*02\*  
Fragmentation Code  
M423 M750 M905 N102 Q233  
Specific Compounds  
A04LJK A04LJA

Chemical Indexing M2 \*03\*  
Fragmentation Code  
F012 F013 F014 F015 F016 F123 H4 H404 H423 H481  
H8 J0 J011 J1 J171 K0 K8 K850 M280 M311  
M314 M321 M333 M340 M342 M349 M373 M381 M391 M413  
M510 M521 M530 M540 M750 M904 M905 N102 Q233  
Specific Compounds  
A3TVMK A3TVMA

Chemical Indexing M2 \*04\*  
Fragmentation Code  
H4 H405 H484 H8 J4 J471 K0 L8 L814 L821  
L831 M280 M315 M321 M332 M344 M349 M381 M391 M416  
M430 M620 M782 M904 M905 M910 N102 P831 Q233 Q505  
Specific Compounds  
00038K 00038D 00038M  
Registry Numbers  
0038U

Chemical Indexing M2 \*05\*  
Fragmentation Code  
H1 H100 H181 J0 J011 J1 J171 M280 M314 M321  
M333 M340 M342 M349 M381 M391 M416 M430 M620 M782  
M904 M905 M910 N102 P831 Q233 Q505  
Specific Compounds  
00312K 00312D 00312M 15415K 15415D 15415M  
Registry Numbers  
0312U

Chemical Indexing M1 \*06\*  
Fragmentation Code  
M423 M430 M782 M905 N102 P831 Q233 Q505  
Specific Compounds

A1CNAK A1CNAD A1CNAM

## Chemical Indexing M1 \*07\*

Fragmentation Code

M423 M430 M782 M905 N102 P831 Q233 Q505

Specific Compounds

A00GCK A00GCD A00GCM

## Chemical Indexing M1 \*08\*

Fragmentation Code

M423 M430 M782 M905 N102 P831 Q233 Q505

Specific Compounds

A00H1K A00H1D A00H1M

## Chemical Indexing M1 \*09\*

Fragmentation Code

M423 M430 M782 M905 N102 P831 Q233 Q505

Specific Compounds

A00H3K A00H3D A00H3M

## Chemical Indexing M6 \*10\*

Fragmentation Code

M905 P816 P831 Q233 Q505 R501 R502 R515 R521 R624

R627 R637 R639

UNLINKED-DERWENT-REGISTRY-NUMBERS: 0038U ; 0312U ; 1732U

## SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C2001-081936

Non-CPI Secondary Accession Numbers: N2001-194234

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